

Claims:

1. A method of depositing material on a substrate layer, comprising the steps of:

(a) forming a multilayered structure, said forming comprising:

(i) coating said substrate layer with a spacer/pattern layer,

(ii) pressing a cover layer against said spacer/pattern layer;

(b) dipping said multilayered structure into solution containing said material for a sufficient length of time to allow said solution to spread through capillary action to a predetermined region defined by said spacer/pattern layer; and

(c) removing said cover layer from said spacer/pattern layer.

2. The method of depositing material on a substrate layer of claim 1, wherein said coating comprises:

placing said spacer/pattern layer on said substrate layer; and

selectively removing portions of said spacer/pattern layer to define said predetermined region.

3. An OLED (organic light emitting diode), wherein at least part of said OLED is manufactured using the method of depositing material on a substrate layer of claim 1.

4. A method of depositing a plurality of materials on a substrate layer, comprising the steps of claim 1 and further comprising the step of repeating step (b) with a different solution containing a different material until a stack of layers is formed, before said removing said cover layer.

5. An OLED, wherein at least part of said OLED is manufactured using the method of depositing a plurality of materials on a substrate layer of claim 4.

6. A method of depositing a plurality of materials on a substrate layer, comprising the steps of claim 1 and further comprising, after step (c), repeating steps a(ii), (b), and (c) with a different solution containing a different material until a stack of layers is formed.

7. An OLED, wherein at least part of said OLED is manufactured using the method of depositing a plurality of materials on a substrate layer of claim 6.

8. A method of depositing a first material and a second material on a substrate layer,
5 comprising the steps of:

(a) forming a first multilayered structure, said forming comprising:

(i) coating said substrate layer with a spacer/pattern layer, wherein said
spacer/pattern layer defines a first region and a separate second region,

(ii) pressing a first cover layer against said spacer/pattern layer;

10 (b) dipping said first multilayered structure into a first solution containing said
first material for a sufficient length of time to allow said first solution to spread
through capillary action to said first region;

(c) removing said cover layer from said spacer/pattern layer;

15 (d) pressing a second cover layer against said spacer/pattern layer to form a
second multilayered structure;

(e) dipping said second multilayered structure into a second solution containing
said second material for a sufficient length of time to allow said second solution to
spread through capillary action to said second region; and

(f) removing said second cover layer from said spacer/pattern layer.

20 9. The method of depositing a first material and a second material on a substrate layer
of claim 8, wherein said coating comprises:

placing said spacer/pattern layer on said substrate; and

25 selectively removing portions of said spacer/pattern layer to define said first
region and said separate second region.

10. The method of depositing a first material and a second material on a substrate
layer of claim 8, wherein said second cover layer is said first cover layer and said
second multilayered structure is said first multilayered structure.

30 11. An OLED, wherein at least part of said OLED is manufactured using the method
of depositing a first material and a second material on a substrate layer of claim 8.

12. A method of depositing at least three materials on a substrate layer, comprising the steps of claim 8, and further comprising the steps of:

5 (g) pressing a third cover layer against said spacer/pattern layer to form a third multilayered structure;

(h) dipping said third multilayered structure into a third solution containing said third material for a sufficient length of time to allow said third solution to spread through capillary action to said third region; and

10 (i) removing said third cover layer from said spacer/pattern layer.

13. A multilayered structure for depositing material on a substrate layer, comprising:

(a) said substrate layer;

15 (b) a spacer/pattern layer coating said substrate layer, wherein said spacer/pattern layer defines at least one region having at least one conduit for drawing in solution containing said material by way of capillary action; and

(c) a cover layer pressed against said spacer/pattern layer.

20 14. The multilayered structure for depositing material on a substrate layer of claim 13, wherein said at least one region is a plurality of regions, each one of said plurality of regions having a separate said at least one conduit.

15. An OLED comprising the multilayered structure for depositing material on a substrate layer of claim 13.

25 16. The multilayered structure for depositing material on a substrate layer of claim 14, wherein each of said plurality of regions has a different pattern, wherein at least one of said plurality of regions has a pattern comprising lines.

30 17. The multilayered structure for depositing material on a substrate layer of claim 14, wherein each of said plurality of regions has a different pattern, wherein at least one of said plurality of regions has a pattern comprising icons.

18. A method of depositing material on a substrate layer, comprising the steps of:

(a) forming a multilayered structure, said forming comprising:

(i) coating said substrate layer with a first part of a spacer/pattern layer,

(ii) pressing a cover layer attached to a remaining part of said

5 spacer/pattern layer against said first part of said spacer/pattern layer to form a complete said spacer/pattern layer;

(b) dipping said multilayered structure into solution containing said material for a sufficient length of time to allow said solution to spread through capillary action to a predetermined region defined by said spacer/pattern layer; and

10 (c) removing said cover layer from said first part of a spacer/pattern layer.